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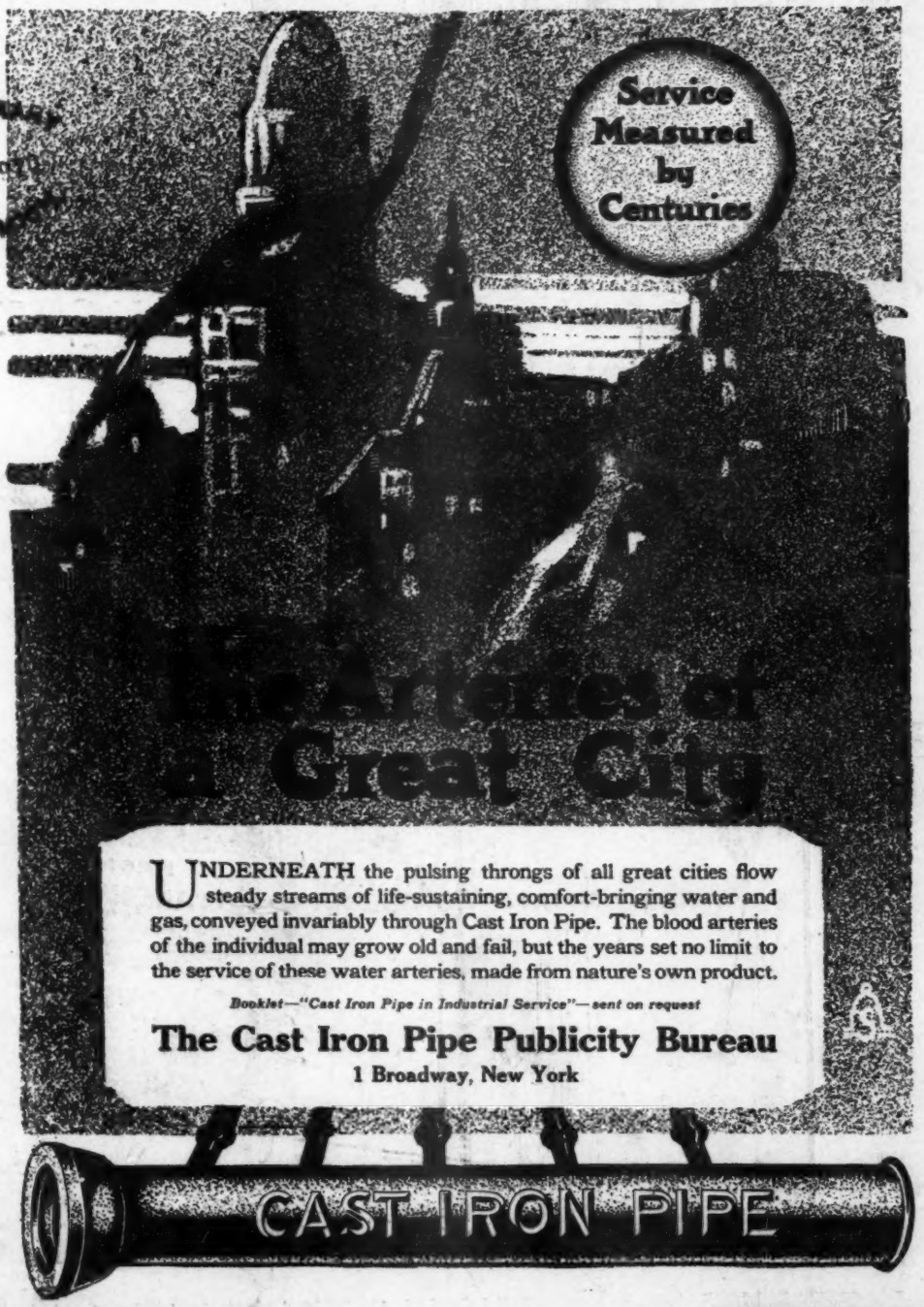
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American
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Even in a Seller's Market There Is Yet Opportunity for a Competent Purchasing Department to Effect Large Savings for the Utility

Purchasing Agent Should Let No Seller's Salesman Get Away Without Interview—He Is Useful as a Source of Information and a Means to Lower Prices—A Man to Be Cultivated, Not Merely Endured or Ignored

By J. M. KNOWLES

We have seen that the vast drain on man-power and materials during the war period has resulted in a practically constant upward trend of wages paid to labor entering into the manufacture of almost every product. The condition is still in effect and manufacturers everywhere are striving to offset their high direct labor costs by the substitution of mechanical devices for manual labor, also by means of various intensive production methods to reduce the labor cost per unit of production.

Big Opportunity in Smaller Companies

In this drive for minimum manufacturing cost, there is a large field for further reduction in the purchasing of the materials entering directly and indirectly into the making of a finished article. It is an important adjunct to the manufacturers' desire for low producing cost, and is of special importance to the public utility corporation, whose selling price for finished product or service is not governed by general market conditions, as is the case in the field of private manufacture. It can readily be seen that efficient purchasing is of primary importance to the public service company.

Check Up the Jobber or You May Pay for His Shortcomings

These facts are generally recognized in the larger companies, but in some of the smaller concerns the purchasing of a large quantity of the material used is delegated to some person to include with other duties. Quite often the method employed in the placing of an order is to send it to the concern whose price and delivery is believed to be the best obtainable, but with no actual information that such are the facts. Competitive quotations are not asked for previous to the placing of the order, and when the invoice is presented, it is checked as reasonable, and passed on for payment.

It is obviously true, that, unless competitive quotations have been secured, it would be very difficult to know that the price paid and the delivery effected were the best that could be obtained. This has been especially true during the last several years, when prices generally were almost continually changing, and deliveries were slow and uncertain. When an order is placed with a jobber without previously securing a quotation, the price the buyer pays is that originally paid by the jobber plus his handling cost and profit, assuming that no price agreement between jobbers is in effect. The jobber may or may not have purchased the goods at the lowest price obtainable, nevertheless, his selling price must be high enough to enable him to make a profit. The only way to check him up in this is to ask for competitive quotations previous to the placing of an order.

In the interest of economical and efficient purchasing for a public utilities company, some person should be designated to take up this important work in a thorough and comprehensive way, and if it does not demand all of his time, all other duties he may perform should be of a secondary nature.

He should familiarize himself with the quality of material desired, the prevailing market prices, the proper quality to purchase at a given time, and the most reliable sources of supply. At all times he should be in close touch with the storekeeper, that they may confer on questions about stock on hand and of impending increases in prices, also as to the shipment and receipt of goods on order, and the quality of goods delivered. The buyer must also work in close co-operation with the department or person ordering special material, so he may be guided by any technical knowledge they may have of the material desired, and that he may inform them of newly developed articles on the market.

Before placing an order, he should ask for as many quotations on the material wanted as his judgment dictates, and should at least get two prices, if possible.

His decision as to who will be favored with the order, shall be based on the quality of material offered, the price, and the delivery specified. His order, when placed, should show the quoted price, as well as terms of delivery and discount for cash payment, if any is offered. The record of quotation should be filed for future reference, and a separate card record of articles purchased should also be made, showing the class of material, its quantity and unit price, as well as date of purchase and name of supplier. This card record is very important, as it shows the actual amount of material purchased over a given length of time and is also valuable for pricing inventories, fixing resale prices, and for charging out material from stock. In the writing of an order, three copies should be made, one of which shall be filed in the purchasing department, one given to the storekeeper or department requisitioning the material, and the third copy sent to the accounting department as a record of material purchased. The invoice for the material may be checked as to quantity, price, and terms by either the accounting or purchasing department.

Every Difference in Quotations an Advantage to the Buyer

Differences in quotations from competing concerns on material of like quality will be found at all times, and every difference is to the advantage of the buyer. No trouble will be experienced in getting bids, as sellers will be eager to quote in competition where such is required previous to the placing of an order. Manufacturers and jobbers are intent on holding to the volume of sales they have established during the last five years, and competition for business is sure to be very keen in the near future. The asking of quotations from sellers and the resultant receipt of certain orders enables them to determine on what articles their prices and deliveries are out of line, and they will very often take steps to assure themselves of the next order for such material by the quotation of a lower price and better delivery than previously.

The buyer should bear in mind that competitive prices must be obtained on a like quality of material, as it is not good economy to buy inferior quality at a lower price. He should rigidly adhere to the rule that inferior substitution of goods on order will not be allowed, and it is the duty of the receiving department to notify him when such substitution is attempted.

Purchasing Machine Parts, Castings, Etc., on a Competitive Basis

Quotations may often be procured from the manufacturers of articles, very many of whom prefer to sell direct to a consumer rather than through a jobber or dealer. Attractive prices will be quoted by them on reasonable quantities, but it must be borne in mind that deliveries in certain lines will not be immediate, due to priority of orders and to delays in shipping.

Contracts for certain materials may be entered into for protection against a price increase and for the assurance of delivery when material is required, providing the quantity of such material is sufficient to warrant placing a contract.

A considerable saving may be effected by the purchasing agent in the purchase of machine parts, forgings, castings, etc., if it is done on a competitive basis. Orders are sometimes placed for products of this nature with the concern who originally furnished the installation, when by making a sketch from a sample of the part required, or from the buyer's plant drawings, competitive prices may be obtained from various machine shops and foundries direct, and these quotations will often be much lower than the prices charged by the original supplier, whose practice it sometimes is to have the parts made by outside concerns.

The purchasing agent will benefit himself greatly by making it a point to see every salesman who calls on him. The salesman is a specialist in his line and the wise buyer will gain much good information from him. He often has important knowledge of the future trend of the commodities market and will gladly accept the opportunity to acquaint the buyer with this information. A salesman should not be turned away without an interview for the reason that the purchasing agent is too busy to see him, as it is always possible, where necessary, for a tactful buyer to indicate that the interview must be short, and no salesman can take offense if he is courteously dismissed after a brief visit. Some of the largest concerns in the country make it a rule that all salesmen must be interviewed by a representative of the purchasing department. The trouble experienced by a buyer in terminating an interview with the persistent salesman is quite often due to the fact that he fails to indicate politely but decisively that the visit must end. The salesman can be made of great help in obtaining preferential quotations and shipments, and in these days of abnormally high prices and slow deliveries he is a man to be cultivated and not merely endured or ignored.

Using Carbonic Acid Gas in Storing Coal in Overhead Bunkers

The storage of coal in overhead bunkers increases under certain conditions the danger of spontaneous ignition by allowing a draft of air through the bunkers. This method of storing coal, however, has obviously great advantages, as the coal can be withdrawn by gravity.

At Dormund a method of storing coal has been evolved which combines the advantages of the overhead bunker with absolute safety against spontaneous ignition. According to some official details which have been gathered with regard to this installation, it consists of three cylindrical bunkers with semi-spherical top and base, each of which holds 2,500 tons of coal. There are three exits for withdrawing the coal in the central line of the conveyor which handles the coal, and there are three inlets at the top for receiving the coal. The lower outlets close gastight, while the upper ones, though requiring to have a good fit, need not necessarily be so tight, since the carbonic acid gas is nearly twice the weight of air and does not therefore escape out of the top. A simple structural steel tower receives the coal by grab from a barge; this is shot into the small hopper, from where it is fed on to a push-plate conveyor, the path of which surrounds the whole installation. It can, therefore, both feed and withdraw the coal. When coal has to be loaded back into vessels it is discharged and by chute into vessels. There is a slight leakage of carbonic acid gas during the withdrawal of the coal, but this is but small and can easily be replenished.

Combination Gas and Electric Lighting for a High School

Walter F. Norton Describes Before the New England Association of Gas Engineers How Lighting Problem Was Solved—Classrooms, Laboratories and Study Room Illuminated by Gas

FIG. 1.—NEW NASSAU HIGH SCHOOL WHERE GAS SHARES IN THE LIGHTING

In March, 1917, the city of Nashua lost one of its large school buildings by fire, and decided to replace it with a modern high school. When the specifications were gone over the writer was pleased to find that both gas and electricity were to be used, as it insured us that we would have good lighting, at all times, under all conditions.

A general description of the building as to the construction, size and design will show the lighting problem we had to solve. The building (Fig. 1) is three-story brick, fireproof throughout, trimmed with artificial stone, Gothic style.

It contains twenty-two unit classrooms for thirty-five pupils each; three large study rooms seating 110 pupils each; a large commercial department with separate typewriting rooms; a science department with physical, chemical and biological laboratories; also lecture rooms, offices, storerooms, drawing rooms, medical inspection and dental rooms, a general library and teachers' rooms. The center of the building, which is in the form of the letter "H," is occupied by an auditorium, seating, with its balcony, 1,200 people. In the basement, directly underneath this auditorium, is a drill hall, 70 ft. square and 14 ft. in the clear. In addition, a large lunchroom is provided, where over 500 pupils are fed every day, all the food being cooked in the building by the Domestic Science Department on gas ranges.

FIG. 2.—INTERIOR CONSTRUCTION OF COMBINATION LAMP USED.

The size of the unit classrooms is 24 by 30 ft., by 12 ft. in height. They are lighted, by day, from one side only, the light coming over the left shoulder of the pupil in every case.

The ventilation of the room is by electrically-driven fans which take the fresh air from the top of the building. They force 30 feet of air per pupil per minute into each room, at a point 7 ft. above the floor level. At the opposite side of the room the vitiated air is forced out, giving a complete change every eight minutes.

FIG. 3.—THE COMBINATION FIXTURE AS IT APPEARS IN THE CLASSROOMS.

FIG. 4.—ELECTRIC FIXTURE IN HARMONY WITH THOSE USING GAS.

FIG. 5.—ARRANGEMENT OF LIGHTS IN AUDITORIUM EFFICIENT AND PLEASING TO THE EYE

FIG. 7.—SMALL GAS BRACKET

The floors of the building, all being of reinforced concrete of the pan type, gave us a fine chance to do all the gas piping with very little cutting of partitions, as we could follow after the man placing the steel flat-furring and before the metal lathing was put in place.

The openings for the lighting having been laid out by the architect in all the rooms, we decided to have the main feeders large enough to take care of the outlets in the laboratories, lunchrooms, and other rooms where gas would be used for other purposes than lighting, thereby saving extra pipe and labor, as these rooms would not be used to any great extent in the evenings.

Outlets for Lighting, Heating and Cooking

Over a mile of gas-pipe was used in the building to complete the work which has outlets for lighting, heating and cooking. All the pipe was tested in sections as the work progressed, and a final test was made before the plasterers started the plastering. All the piping was arranged so that it could be blown out clean from dirt before the fixtures were put on. The pipe standard that we have used for years was followed upon all the work as to the size and length of runs.

Lighting Fixtures

The question of lighting fixtures was then to be settled. We believed a combination fixture could be made that would be in keeping with the building and give perfect lighting conditions with either system. As we could not find any fixture on the market that was suitable, the whole job was turned over to the Welsbach Company to produce a fixture which has beauty and was easy to maintain, for we all know that a gas lighting unit which cannot be maintained easily is apt to be soon out of commission.

After several months of experimenting with samples of semi-indirect fixtures in an adjoining schoolhouse where the conditions would be the same, we decided upon a fixture of the semi-indirect type with three gas mantles and three electric bulbs all in the same bowl as the one we would use in all the classrooms. Figure 2 shows the arrangement of bulbs and mantles in the fixture, and Figure 3 the design of the fixture, which is equipped with a 16-in. bowl. These fixtures were so made that the bowls could be taken out by simply giving them a one-quarter turn, thus allowing them to be dusted very easily when necessary.

FIG. 6.—HOW THE DRILL HALL APPEARS AT NIGHT

In the large auditorium we used a straight electric figure with a 20-in. onyx bowl. (Fig. 4.)

Special semi-indirect gas brackets on the walls will be used for emergency lights, or when the whole amount of light is not required in the hall. This special bracket was used in all the hallways in connection with semi-indirect electric ceiling fixtures, and is equipped with a one-mantle horizontal burner and 8-in. opal bowl. This bracket can be seen in Fig. 11.

Artificial Light Often Menace to Eyesight

Artificial light, as it is still frequently used, is a serious menace to the eyesight of our nation. Indeed, a great deal of the lighting of our public places and homes is dangerous to health in that its effect upon the eyes is injurious. But, of course, in lighting a room generally, as semi-indirect lighting does, there is not the bright light which obtains directly below a single direct light; on the other hand, we get an evenly distributed light that enables one to read very comfortably in any part of the room.

After twenty weeks of evening school, four nights a week, neither the fixtures nor the ceiling show the slightest tract of discoloration, and the breakage of mantles during this time has been practically negligible.

FIG. 8.—THE FOYER BY DAYLIGHT

FIG. 9.—THE KITCHEN BY DAYLIGHT

PHOTOGRAPHS MADE OF BOTH LIGHTING SYSTEMS WITHOUT RETOUCHING

The day photographs were made with an almost perfect condition of daylight illumination, as the ground was completely covered with fresh snow and the sunlight itself was quite diffused. This all gave an exceptionally even distribution of light.

The night photographs with either gas or electricity were all exposed thirty minutes with the same camera stop, and none of the negatives, prints or half-tones was retouched in any way, so that the comparisons of gas and electric illuminations are eminently fair in every case.

Auditorium.—Fig. 5 is a daylight view and shows electric semi-indirect fixtures suspended from the ceiling, also the gas semi-indirect brackets on side walls and short electric semi-indirects under balconies.

FIG. 11.—HALL AND STAIRWAY IN DAYLIGHT

FIG. 10.—HALLWAY BY NIGHT

Drill Hall.—Fig. 6, taken at night, shows electric pendent fixtures and small gas bracket lights along the sides of the room. (See also Fig. 7.) These small gas brackets were also used in the basement hallways.

Foyer.—Fig. 8 shows a daylight view with electric semi-indirect fixtures and special gas semi-indirect brackets.

Kitchen.—Fig. 9 is a daylight view. The kitchen and surrounding spaces are lighted by rows of ornamental single mantle lamps—alternate rows being adapted for electricity.

Hallway.—Fig. 10 is a night view, lighted by electric semi-indirects in center and gas semi-indirect brackets on side walls.

Hall and Stairway.—Fig. 11 is a daylight view, and shows a gas semi-indirect adapted to electricity, and a special gas semi-indirect bracket.

Stage.—Fig. 12 shows a photograph of the stage from

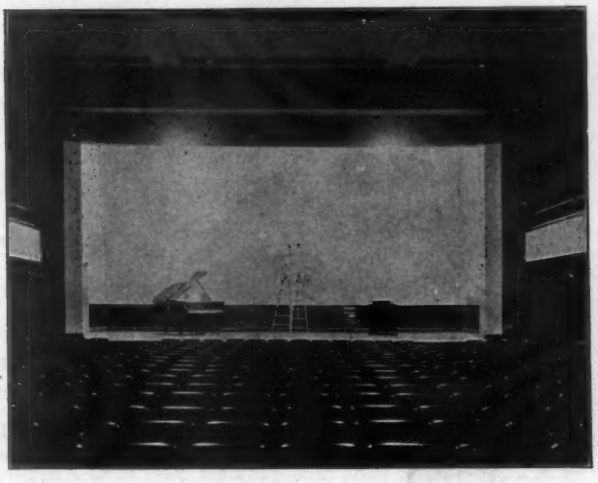

FIG 12.—GAS AND ELECTRICITY SHARE IN LIGHTING STAGE

FIG. 13.—CLASSROOM LIGHTED BY GAS

FIG. 14.—A STUDY ROOM IN DAYLIGHT

the back of the auditorium, with all lights out except the two large semi-indirect fixtures with which the stage was lighted. These fixtures are the same size and design as shown in Fig. 4, but each is equipped with nine No. 8 standard size inverted mantles and nitrogen lamps consuming in all 500 watts. It is interesting to compare the illumination from these two fixtures. The one to the right (facing the stage) is burning gas, and the one to the left electricity.

Classroom.—Fig. 13 is an example of a standard classroom illuminated by gas, of which there are twenty-two (22). Each of these rooms is lighted by four combination semi-indirect fixtures, as shown in Fig. 3, each fixture containing one Kinetic burner equipped with three No. 33 mantles and three 60-watt clear Mazda lamps. The bowls are 16 inches in diameter.

Foot-candle readings made in this room (identical position) show as follows:

For daylight . . a variation between 2.5 and 8.5
For gas . . . . . a variation between 4.6 and 6.0
For electricity. a variation between 4.25 and 6.0

We thus have a much more evenly lighted room with gas or electricity than with daylight.

FIG. 15.—STUDY ROOM LIGHTED BY GAS

FIG. 16.—LECTURE ROOM LIGHTED BY GAS

Study Room.—Figs. 14 and 15 show a daylight and a gaslight view, respectively, of a study room, of which there are three in the building. This room is lighted by ten (10) semi-indirect combination fixtures (see Fig. 3) exactly like those used in the classrooms. The room is very evenly and beautifully illuminated. The lighting units in this room were purposely allowed to go without maintenance since installation (about three months) and foot-candle readings then taken. After this the bowls were thoroughly cleaned and the mantles and electric bulbs replaced by new ones. New readings were afterwards taken which showed an increase of slightly less than one foot-candle uniformly, for both gas and electricity.

This should prove pretty conclusively that a semi-indirect fixture requires a minimum amount of maintenance.

Lecture Room (Fig. 16) *and Chemical Laboratory* (Fig. 17.—Show rooms illuminated by gas which were rather difficult to light owing to the dark slate tables and bench tops. Each of these rooms is equipped with

FIG 17.—CHEMICAL LABORATORY LIGHTED BY GAS

FIG. 18.—DRAFTING ROOM IN DAYLIGHT

FIG. 19.—DRAFTING ROOM LIGHTED BY GAS

four standard fixtures, and the photographs, we think, both show a fairly even illumination.

Drawing Room.—Fig. 18 shows illumination by daylight, Fig. 19 by gas, and Fig. 20 by electricity. This room is 49 ft. by 22 ft., and has 1,078 square feet floor area. It is lighted by six semi-indirect combination fixtures (similar to that shown in Fig. 3), but designed for one Kinetic burner equipped with four No. 33 mantles and three 60-watt Mazda lamps. Daylight readings give a maximum of 12.5 foot-candles and a minimum of 8.5 foot-candles. The maximum and minimum, for gas, was 6.75 and 4.5; and for electricity, 5.25 and 3.25. An interesting check on the gas and electric readings in this room was made by measuring the maximum and minimum foot-candles, when gas and electricity were used together in the same bowl. In this case we got a maximum of 13 and a minimum of 7, which, it will be noted, in each case is exactly the sum of both when used separately.

It is impossible by half-tones to convey an adequate impression of the beautiful lighting in this building. It is evenly and bountifully illuminated throughout, and the gas fixtures and those adapted to electricity are handsome, dignified and in keeping with the tone of the building itself.

Not only to the few gas men who are still uneasy as to the units with which they have to work in lighting, but to that majority of New England gas men who are enthusiastic over gas lighting, a cordial invitation is extended to visit this modern installation.

Synthetic Ammonia Process

The Times, London, followed up their recent notice of the report of the Nitrogen Products Committee with the announcement that the rights of the new French *Georges blande* synthetic ammonia process has been secured for the United Kingdom, South Africa, India, Australia and New Zealand by a powerful and influential British company, who intend erecting works at Cumberland, England, as quickly as possible to produce on a large scale synthetic ammonia for fertilizers, nitric acid, and other chemicals gotten from ammonia. It is claimed that this system has enormous advantages over the German Heber process and that, in fact, it

FIG. 20.—DRAWING ROOM LIGHTED BY ELECTRICITY

represents the greatest development ever known in connection with the nitrogen industry. About 25,000 acres of land have been acquired. The first unit of the plant to be installed will be of sufficient size to produce yearly 50,000 tons of ammonium sulphate.

Look to Coal Tar and Alcohol for More Immediate Relief in Motor Fuel—Oil Shales Later

N. A. C. Smith of U. S. Bureau of Mines Outlines Present Day Situation and Future Prospects—Fuel Oil as a Motor Fuel.

The last ten years have seen an enormous increase in the demand for petroleum products. This increased demand has been felt in all phases of the oil refining industry, especially in the fuel, illuminating and lubricating oil branches. The biggest increase of all, however, has been in the demand for motor gasoline, which has been caused by the tremendously rapid growth in the use of the automobile. The number of cars and trucks in service increased about 1,700 per cent from 1909 to 1918. The production of gasoline to meet this demand increased from 13,000,000 barrels in 1909 to 85,000,000 in 1918, a gain of 560 per cent. During the same period the production of crude oil in the United States increased only 95 per cent, declares W. A. C. Smith, in a Monthly Report of Investigations of the U. S. Bureau of Mines.

It will be noted that the demand for gasoline, represented by the number of automobiles and trucks in use, has increased a great deal more than the production of gasoline, and seventeen times as much as the increase in the production of crude oil supplies. This increase in demand has been partly offset by the fact that the use of gasoline as a solvent and for cleaning has increased only a little in ten years, so that most of the increase in production has gone to meet the motor car demand.

Increased Recovery per Barrel

It will also be noted that, proportionately, far more gasoline was obtained from the domestic crude produced in the year 1918 than in 1909. This increase has been made by a number of methods, among them, the production of gasoline from imported crude oil and from natural gas, and by cracking fuel oils. But the principal one has been the taking of a larger proportion of the crude as gasoline. This gasoline has, consequently, a lower volatility and this fact is the cause of the complaints heard in recent years as to the quality of gasoline. The country has been faced with the problem of sacrificing quality or quantity; of using less volatile gasoline or having a shortage of supply.

It is claimed that the number of automobiles in the United States at the end of 1919 was 7,500,000, an increase of almost 1,500,000 throughout the year. It has been predicted that the number of automobiles in use at the end of 1920 will be between nine and ten million. The demand for gasoline, therefore, is certain to increase. On the other hand, it is possible that the future increase in the production of crude oil from our own wells will be relatively small as compared with recent years, and that though the importations of Mexican crude may be considerably increased, the gasoline content of this crude will continue low as at present, and it becomes a matter of some concern as to whether the production of gasoline can be increased in proportion to the increase of automobiles expected for this and succeeding years.

It seems unlikely that the quantity of gasoline produced can be increased by using more of the crude and making the product less volatile as has been done in the past. This is because the next fraction obtained from crude oil—kerosene—is in great demand and the price has doubled since the armistice. The point has been reached where an economic balance is approaching between gasoline and kerosene; thus, if any appreciable quantity of the lighter fractions of kerosene is included with the gasoline it will cause a shortage of kerosene with a consequent increase in the price.

Further Competition in Fuel Oils

The other important means of obtaining more gasoline are to extract it from natural gas and to "crack" fuel oils. The extraction of gasoline from natural gas is approaching its maximum. It has been a comparatively new industry developed during the last ten years, but the gases that can yield gasoline have largely been exploited and it cannot be expected that there will be the same rate of increase in the production of this "casing head" gasoline as in the past.

The process of cracking fuel oil into gasoline is not subject to the same limitation in the supply of base material, for fuel oil constitutes a large part of the crude oil refined. However, the changing of fuel oil into gasoline by cracking processes involves a considerable expense and waste of material. Therefore, unless the margin in price between the two is considerable, cracking is not profitable.

Moreover, the demand for fuel oil has been increasing rapidly during the past year and the price has more than doubled. Our merchant marine, navy, and many other large users of fuel oil have come into the market for large quantities and are planning to develop demands that will make the competition more keen. Therefore, it may prove to be unprofitable to crack more of our fuel oil into gasoline, unless the price of gasoline is also increased.

It is probable, then, that the quality of gasoline will not change much in the near future. If the engine and the carburetor of to-day can use the present quality of gasoline in a satisfactory manner, then they can continue to do so for some little time to come. Furthermore, it is probable that the idea of providing for the increase in the number of automobiles by using kerosene as fuel cannot be realized to any very great extent. Considerable amounts of kerosene, the total production of which in this country is only half as much as the production of gasoline, can be diverted to the automotive industry only if automobile users are prepared to pay a price greater than can be afforded in the regular uses of kerosene.

The use of fuel oil in the internal combustion engine may be the solution of the problem. Fuel oil constitutes over 50 per cent of the products obtained from the crude oils refined in the United States. Some of this fuel oil is a comparatively light and volatile distillate, but much of it is a heavy, viscous tar. It is used to-day for raising steam under boilers, for making or enriching gas, for cracking into gasoline, for metallurgical purposes, and for internal combustion engines of the Diesel type. This last use, considered in a large way,

(*Continued on page* 227.)

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As the Journal Views It

Still Possible to Secure Economies in Purchasing

We have been told so often that it's a seller's market that we have come to accept it as a fact beyond question and beyond compromise.

We enter a shoe store. The greeting we are met with is by no means cheerful or inspiring. But, borne down with our preconceived notion, we do not take exception. Actually are we not privileged that the worthy merchant permits us to enter his store? We are told what we must take and the price we must pay. Neither suits us; nevertheless we hustle out, miserably hugging our purchase close to our bosom. We have accomplished something; managed, in a seller's market, to buy a commodity.

The picture is exaggerated, of course, but not overmuch. In our personal purchases, and some of us in our business purchases, we have taken this seller's market dictum too literally. We have gotten out of the habit of shopping about.

It is refreshing, therefore, to have J. M. Knowles assure us, in this week's leading article, that even in these times it is possible to effect savings by securing competitive bids on the materials we buy. The individual seller is not so sure that this being a seller's market, all business must come to him whatever his prices and terms that he disdains to quote in competition. There still remain various people who have the same thing to sell.

A conviction may exist in the minds of some that the depleted condition of the materials market will not warrant a campaign for close prices; but this belief should be quickly dispelled, as the buyer can, by undivided attention to his work, not only procure

more advantageous offerings on his requirements but may actually improve the delivery service he has been accepting.

The intent of this article is not to detail the organization of a purchasing department but to advocate the policy of thorough investigation into sources of supply prior to placing of orders for material, with the object of better and more efficient purchasing for public utility companies.

Is He a Lazy Salesman?

With increasing frequency of late we have heard the gas man spoken of disparagingly as a merchandiser. Any peddler can sell units that cost but a few dollars; it takes a salesman to sell a unit that costs into the thousands, runs the comment. His critics admit the gas man has been successful to a degree in vending mantles, lamps, ranges and things that cost less than a hundred dollars. They will not concede that he has done as well as he should have in selling automatic water heaters. And they claim that, in the general sense, he has failed utterly to make a showing in selling installations that run above a thousand dollars and others that have to be sold mainly in blueprint form.

We would like to refute these statements. We know that there are installations using gas that the user paid big sums to have installed. But absolute knowledge that the gas man, unassisted, sold a good part of these installations is lacking in so far as this office, at least, is concerned.

If the gas salesman has proved his ability only as to the small stuff, we can readily see where he alone is not to blame.

A shipyard is not going to spend big money on a plate-bending furnace merely because a gas salesman thinks it might work. He will have to present something more substantial than this.

It seems reasonable that to sell a big installation a gas company might have to go to considerable expense in experimenting, testing, demonstrating, etc. And then the sale might not be made. An ultra-conservative company or one managed by people who are not confident of their own knowledge, the thing they are selling and their own judgment might consider such ventures too speculative. In such cases the fault for the lack of big installation sales lies with the company, not with the salesman.

But, we are reminded, there are appliances, stock appliances it might be said, already available that cost considerably more than the most expensive domestic appliances. These have proved themselves, can be seen, and demonstrations can be arranged. Why is it with these that most of the sales are made by the manufacturer and handed over to the gas company, rather than vice versa?

This is another matter. It can only be attributed to sales laziness. It is easier, much easier, to induce a person to spend a dollar than ten. Very often the sale can be made even with an utter lack of knowledge on the salesman's part as to the product he is selling. Selling the costly appliances demands study, understanding and work. It compels thinking, and to this most human beings are adverse.

It should be a matter of pride with the gas company and the gas salesman that anything properly pertaining to gas in their territory that they cannot sell couldn't be sold anywhere. In a good many situations to-day, as we understand it, conditions are not such. Manufacturers' representatives make killings; plumbers and dealers make more than a good living. The gas company and its salesmen just plod along.

Dumping Dollars into the Gutter

A most repugnant picture is presented in a letter sent to the Public Service Commission, New York State, by C. H. B. Chapin, secretary of the Empire State Gas and Electric Association, relative to the gas-oil situation.

To maintain a high candle-power, he points out, millions of gallons of gas oil are used in New York City alone.

Anyone versed in gas utilization is aware that in so far as benefit to the consumer is concerned this is practically pure waste. It is like unto dumping dollars into the gutter, only worse. New dollars may be printed, and the basic value behind them hasn't left its repository in the vaults of the Government treasury. But the oil once spent is gone forever and is not replaceable. Some day the wheels of industry might prematurely cease turning for a want of lubricant that less flagrant use of that oil reserve might have postponed.

It is quite likely, now that no gas oil is to be had, regulatory rulings notwithstanding, that this stupid waste will be brought to an end.

It remains a sad commentary, however, on human intelligence and democratic government that it was permitted to continue until the compulsion of near-famine compelled a stop.

The Government Seeks to Locate Gas Containing Helium

Before the outbreak of the World War, helium, first observed in 1868, as an element in the incandescent gases of the sun, was obtained only in very minute quantities as a scientific curiosity; but even so, enough was learned of its properties to demonstrate that on account of its perfect inertness, eliminating possibility of fire and explosion risk, and its extreme buoyancy, it would prove an ideal balloon gas if it could be produced in sufficiently large quantities. Then came its discovery, in 1907, in some of our Western natural gases, and the possibility for its utilization for balloon

purposes began to take on form and substance, culminating in reality after the entry of the United States in the war.

It was recognized that the filling of military lighter-than-air craft with this non-inflammable gas would provide a weapon of such immense importance that it might prove one of the decisive factors in winning the war. The Navy and War Departments, therefore, took measures for the production of helium on a large scale. In co-operation with the U. S. Bureau of Mines and certain commercial concerns, plants for helium extraction were erected in Texas, and when the armistice was signed, about 150,000 cu. ft. of the gas, compressed under 2,000-lb. pressure in steel cylinders, were ready on the dock for shipment to France.

But the supply of helium is apparently limited. Only a special type of natural gas contains it, and as this gas is being rapidly consumed for domestic and industrial purposes, the Government is putting forth an effort to explore the extent of this resource and to provide ways and means to conserve it. A field survey is in progress, the aim of which is to locate gas wells suspected of containing helium, to analyze their contents, and to establish their probable ultimate yield.

Helium is found particularly in natural gases that do not burn readily—the so-called "wind gas"—because it is invariably accompanied by comparatively high percentages of nitrogen, a gas which is itself comparatively inert. Samples of such natural gas are taken from the wells and sent to the Bureau of Mines Experiment Station at Ft. Worth, Texas, where in the laboratory, under the direction of Dr. C. W. Seibel, they are examined for helium. This laboratory would like to learn of the existence of such gas from any locality. In appropriate cases cylinders will be sent for collecting samples for analysis.

Look to Coal Tar and Alcohol for Immediate Relief in Motor Fuel—Oil Shales Later

(*Continued from page 224.*)

is by far the most efficient. And it is in this use of fuel oil that there is most possibility of solving the question of fuel supply for the automotive trade. If engineers are able to design an automobile or truck engine that will use fuel oil in a satisfactory manner, they will relieve the danger of the impending shortage and make possible the desirable extension of the use of the automobile and truck. An automotive engine using fuel oil can compete against any other large user of fuel oil because this will be the most efficient use to which the oil can be put. Consequently, the supply of motor fuel would be limited only by the total supply of fuel oil.

Not to Forget Increased Use of Lubricants

One important exception must be made to this statement, and that is, that part of the oil now used as fuel can be made into lubricants. There has not been sufficient demand for lubricants in the past to consume all that might be made from the crude oils of the country, and the knowledge of how to obtain high-grade lubricants from certain kinds of oils, has been lacking. This knowledge is rapidly being acquired, and it is probable that our chemists will be able in the future to produce satisfactory lubricants from almost any crude. The demand for these products is certain to increase in the future, for it must be emphasized that lubricants are the most necessary of all the products of crude oil. We might get along without gasoline, kerosene, and fuel oil, but the industrial development of to-day would be impossible were it not for the enormous quantities of oil used to lubricate every moving part of our machinery, and these lubricants can be obtained in sufficient quantity only from our petroleum.

The preceding statements have been made, taking into primary consideration the crude oil supplied by the oil wells of the United States and Mexico. There are, however, several sources of motor fuel which will probably come into use in the future. The most important of these are the enormous quantities of oil-bearing shale, found chiefly in the States of Colorado, Wyoming and Utah. Crude oil very similar to petroleum can be obtained from these shales by distillation processes. These shales constitute a reserve of oil many times greater than the supply in the oil fields, but this reserve can be made available only at considerable expense, and only after the development on a large scale of mines, retorting plants and refineries. It will require investments of hundreds of millions of dollars and a period of many years to develop the shale industry, but it will eventually be of great value as a source of oil.

Benzol and Alcohol

A source of motor fuel which is more important to-day, though possibly of less ultimate value than the deposits of shale, is found in coal tar. When bituminous coal is distilled a considerable number of by-products are produced, among others, a quantity of benzol and toluol. These are usually sold in mixtures known as "commercial benzol" and this "benzol" is in use to-day in considerable quantities as a motor fuel. At the present time an average of 75,000 tons per day of bituminous coal is still being distilled in the old-style "bee-hive" coke ovens, and the tar and volatile products are lost. As by-product coke ovens come into more general use there will be an increasing production of benzol, which can be blended with gasoline and thus add to our motor fuel supply.

Another substance which can be used for motor fuel is alcohol. Alcohol can be used without blending, in automotive engines, if the carburetors and cylinders are redesigned for efficiency. It cannot be blended directly with gasoline, but mixtures of alcohol, benzol and gasoline can be made which will not separate on standing. Such mixtures are being used in a limited way at the present time, and it is probable that this use of alcohol will increase if the price of motor gasoline increases. Alcohol can be produced from a large number of vegetable waste products, such as molasses, small potatoes, etc., and it is probable that it can also be obtained from other vegetable wastes, such as sawdust, although this has not been demonstrated commercially at the present time.

To sum up, the motor fuel problem must be considered in two aspects: In the immediate future, it is likely that there will be little change in the character of the gasoline sold throughout the United States. Surveys made by the Bureau show that the change in volatility of motor gasoline from April, 1919, to January, 1920, is so slight that it is negligible. The more distant future is, of course, problematical, but it is estimated that, all sources considered, there will be a sufficient supply of motor fuel, although it is probable

that it will be more expensive in proportion to the general run of prices than it is to-day. Some of this fuel can be used as at present, but it will probably be necessary to design new engines to use fuel oil, as it is doubtful if the present gasoline engine and carburetor can be modified for this purpose.

Strikes on the Wane

Louis Rothschild quotes Hugh L. Kerwin, director of the Bureau of Mediation and Conciliation of the Department of Labor, in *The Nation's Business* to the effect that strikes are on the wane.

"With the exception of the steel strike," says Mr. Kerwin, "actual strikes throughout the country are few and of minor importance. Public opinion has been so taken up with this controversy, and with the coal strike, that people do not see that the general situation is improving."

As proof, for the week ended Dec. 29, 1919, a new low record was reached in the number of strikes reported to the Department of Labor for adjustment. Officials there cannot recall the time when only two new cases were brought before their attention in one week.

Further statistics show that for the month of December some thirty-one new cases were before the Bureau of Mediation and Conciliation. Comparative figures show that during November 34 cases were taken up; in September 73; in August 91; July 91, and June 94.

During the fiscal year the Department of Labor has assigned Commissioners of Conciliation to 1,780 cases, made up of 278 strikes; 1,113 disputes and threatened strikes, 63 lockouts and 17 walkouts. In only 111 instances have the commissioners failed to make settlement.

The Division of Conciliation has shown a decided advance in the number of cases handled and its increasing effectiveness as a mediating agency. For instance, for a part of 1913, when first created, the Division handled 33 strikes or threatened strikes; in 1915, 42; in 1916, 227; in 1917, 378; in 1918, 1,217; and in 1919, the fiscal year just closed, 1,780. In many instances strikes which would have involved thousands of workers engaged on great operations were quietly averted through the efforts of the Commissioners and all this was accomplished with little publicity and the consequent excitement which invariably attended industrial disturbances when heralded in the press.

"In spite of all that has been said and done," our National Conciliator thinks, "a better feeling exists today between the working man and his employer." He concludes, that "while the coming year will not witness a total abatement of the industrial unrest, I believe we shall see a tremendous reduction in the number of actual strikes and lockouts, and that both the Federal and State Government adjustment agencies will be busily engaged in harmonizing matters in disputes between employers and employees while the plants remain in operation. As an evidence of our faith in this statement, the Department of Labor is to-day handling 107 trade disputes involving thousands of workers and of the 107 cases less than 18 are strikes; the others being settled by our commissioners without suspension of operations or loss in production to say nothing of the monetary loss falling upon both workers and managements when a strike is on."

Why It Is That Capital and Labor, Alike Independent of Choice, Distribute Themselves Automatically to Provide the Basic Wants of Man

Is business a game or a free-for-all fight? Is there a system in the business world, or is there nothing but chaos, asks Homer Hoyt, professor of Economics and Business Administration, Delaware College, in *The Nation's Business*. It depends upon the point of view.

First, there is the point of view of the man in the street. He sees men hurrying to work, pushing and jostling, each man for himself and the poorhouse take the hindmost. He sees flesh-and-blood men and women swayed by passions, prejudices and superstitions, tossed about in a maelstrom of hopes and fears. Business seems a vast hodgepodge of individual bargaining, personal ties and luck.

To the man in the street it seems that everyone does as he pleases. In time of peace there is no law prescribing how men shall co-operate in business. No autocratic power issues its edict as to what shall be produced; no despot issues a list of fixed prices by a fiat of the state. On the contrary, there seems to be complete industrial independence. A manufacturer can devote his plant to the production of aeroplanes or cosmetics, pianos or toothbrushes, as he sees fit.

In fact there seems to be no central power house to direct our business activities so that they will work together as a single unit. Then why don't we run off the track completely? Why doesn't our industrial system fly to pieces? If men are free to do as they please, why don't a vast majority of them suddenly decide to be farmers, leaving the city work-shops empty? What keeps our labor force distributed so that each industry is properly manned? How is the stream of new capital piped through our industrial system so that each business can get its share and so that the entire mechanism of industry does not break down for the lack of one wheel?

A philosopher of business gazing at the throngs of New York City from an aeroplane would see many evidences of order in the business world. The erratic human element would be dwarfed and he would see only the business impulses of masses of men. He would see definite currents of humanity moving along grooved paths, some shunted off into brokers' offices, and others switched off into stores, shops and factories with almost automatic precision. The man who on the level of the street appeared to be a detached and independent organism is now seen to be playing as definite a position in the game of business as if he were following the orders of a commanding officer.

Now, if our business philosopher should fly in his aeroplane to a height where he could see the whole earth in one panoramic view, the industrial life of this planet would appear to him to be a gigantic machine, with one great power house furnishing energy to its many complicated parts.

What is the central power house that drives this tremendous world machine? It is nothing but the desire of every man to make a profit, or, as it is often called, private initiative. Without any direction from an outside authority each man is led "by an invisible hand" to co-operate with his fellows in a world-wide team-play. "The invisible hand" is the business instinct of a man which prompts him to seek the branch of industry that pays the highest profit and that also causes him to abandon a losing enterprise.

Using and Misusing Gas

The Usefulness and Profit of a Gas Company Is Measured by the Way in Which It Fulfils Its Responsibility to Advise Present and Prospective Consumers as to the Proper Use of Gas

By SETH BROWN

If gas was delivered to the homes in delivery wagons rather than through a pipe, the merchandising would take on an entirely different aspect.

Those who have to furnish goods or service in competition with others have an advantage which is not enjoyed by institutions which have no strong competition.

Undoubtedly, one of the reasons why gas as merchandise and as a useful servant to mankind is limited is the fact that its manufacture and distribution do not enjoy the stimulus which competition provides. However, this is not an irremediable evil but one which requires only the known application of known principles of advertising, selling and merchandising in order to overcome the inertia.

In the present article and those which follow, it will be my purpose to analyze the different influences which go to make up the total of what is known as selling gas. This will include the basic fundamental of service which 1920 standards show to be the only really dependable platform upon which a business can be profitably conducted.

People Do Not Buy Gas Because They Want More Gas

The first problem which the gas merchandiser must face is this—his product is only a means to an end. In order to promote the sale of gas he must enjoy an intimate knowledge of possible conditions under which it is and can be used.

Manifestly, the first thought—that this means only the different types of heaters, stoves, burners, and other appliances—is erroneous, because all of these appliances are in themselves only a means to an end. Therefore the salesmanager must have deep convictions based upon actual knowledge of home facts in order to accomplish satisfactory results.

It is possible for me to illustrate this point and show the nature of inertia by recounting a recent visit to a showroom owned and conducted by a gas company in an important city.

Over in one corner, sitting at a desk, was a capable woman who could answer any questions. I asked her if she had ever kept house and she graciously smiled and said, "Oh, no." She was surrounded by possibly as many different kinds of interesting apparatus as one could readily imagine, but she had only a second-hand knowledge of their usefulness. She answered questions in a regular guide-book way. She was not to blame Her attitude was only the reflection of her employers'. They have never really thought they have anything besides gas to sell, when in fact gas is only a means to an end. This woman gave me a sidelight on the whole situation when she said: "I am not sure whether the gas companies care whether they sell any more appliances or not. You know it tends to increase the peak load."

Now, the point I want to rivet is this, that she was talking as if the business was conducted for the benefit of the gas company and not for the benefit of the consumers.

Imagine, I ask you, a department store with a consciousness that they wanted to reduce business or hold it down at certain periods of the year! They know that they must be ready to furnish goods in large quantities when people want the goods in larger quantities, but this gas company seems to have the idea that they can change the desires of the people, furnish them gas only when it is convenient, or, in other words, maintain a steady output, which manifestly is more convenient to the gas company.

In itself this means nothing, but in showing the attitude of the gas company it reveals the fact that the gas company has the wrong idea of service.

Of course, problems of equipment and labor have some bearing on the situation, but if there were ten gas companies competing for the business, everybody would find they could get all the gas they wanted; and it is the business of a gas company so thoroughly to saturate its field and serve every possible consumer that there never could come a time when the consumer could think of any other service to take its place.

The Handicap of Old Age

I have sometimes thought that the relation between gas and electricity is unfortunate for gas because electricity has been more lately developed. People get in the way of thinking that something new is better than the old, and if they have the notion in their heads that the use of gas has been fully developed, they

will naturally be more enthusiastic in regard to the development of electricity.

When all of the improved uses of gas are generally understood and when its value to the consumer is based on the service rendered and not thought of in terms of so much per thousand cubic feet, then I predict a great revival of gas interest and usefulness. I am free to say that there is a possible 25 per cent increase in business which most gas companies could enjoy provided they are ready and willing to put the same knowledge into their selling and merchandising that has been found absolutely necessary in a department store.

Just stop and think what all this means. As a rule, the present plants are sufficient. By adding a slight allowance to present estimates for depreciation and renewals in specific cases, it will be possible to take care of the increased production.

But even this is not the big point at issue. I am taking a far ahead view of the whole matter, and I see the necessity of strengthening service with consumers day by day so as to stabilize the business so that the multiplying attractions of electricity, coal and oil can never stampede the market.

Advertising is education. Merchandising is knowing the needs of the consumers and making the service fit those needs. When these two splendid forces are properly harnessed to the problem of any gas company, they will accomplish three results: (1), they will tend to make present consumers more satisfied; (2), they will have the effect of making the service itself more economical and efficient; (3), they will have a steady influence on that large percentage of prospective users who must be educated at the right time in their home experience in order to establish their home-keeping plans on the basis of the splendid usefulness and the economy of gas as a fuel for cooking, as an economical method of heating, and as a harmonious and cheerful medium for lighting.

To correlate all of these problems and develop each in accordance with its possibilities is no small task. However, it is one which the AMERICAN GAS ENGINEERING JOURNAL has asked me to undertake in behalf of the gas manufacturers of America.

Some Housekeepers Get More Satisfaction From Their Gas Than Others

Gas is a raw material that can be made into comfortable heat and bright, cheery light.

This requires fixtures that are practical and scientific. It is well worth your while to know how to use them correctly.

Just because people get gas so easily and cheaply, they become indifferent to its use.

The Blank City Gas Company desires all its customers to obtain the full heat and light benefit of its gas. Our expert will gladly call at your home and go over all your fixtures and suggest any necessary changes or improvements, without any expense to you.

SUGGESTION FOR GAS COMPANY AD

I cannot do this without their assistance. I want to have every manager appreciate that in a way I am undertaking a specific service in his behalf, and, like any other good servant, the more I know about his problem, the greater assistance I can offer him.

I am going to bring to the merchandising of gas a ripe, practical experience of many years, and I confidently believe that with your assistance, and the co-operation of the management of this publication there will come about a benefit—this may startle you—primarily to the little woman in the kitchen. To the man who is thinking of his expenses in terms of home comfort and the man who is willing to spend money but wants to be sure that he gets his money's worth, in fact, to all of our people, I purpose that these articles shall ring true on the basis of real service and benefit, which, by the way, is the only basis which is ultimately profitable.

INDUSTRIALS WILL BE CONSIDERED

I am accumulating data regarding the industrial use of gas. This in some respects is more complicated, and in others, more simple. Here we have the benefit of the knowledge and experience of industrial engineers, known conditions which have to be met, and more general information.

A preliminary survey, however, shows that there remains a great deal to be done in instructing the different industrials as to the best methods of using gas, and when these reports are finally codified they will form the basis, I believe, of some very helpful messages.

WILL YOU SHARE IN THE BENEFITS AND RESPONSIBILITIES OF THIS WORK?

I am glad to know that the non-competitive features of the gas business has its advantages. I am glad to find that the gas manager in Buffalo is perfectly willing to tell his colleague in Chicago how he does it, and I am also pleased to learn of the wonderful influence which the AMERICAN GAS ENGINEERING JOURNAL has on all of these interests. I will say to you frankly, the more you give me, the more you will get. If you have introduced a new and valuable idea into your gas merchandising work, won't you please tell me about it? (See foot-note.) I may match this information with other

similar information from other sources. I may be able to give you a better conception of the situation than you already have, because of the breadth of the service.

Most of this information will appear in these columns. In the same spirit of service toward you as manufacturers that I shall incorporate toward the little woman in kitchen and the manufacturer who ought to use gas, I ask for your co-operation in my endeavors to improve the merchandising of gas on the only basis upon which any improvement can ever be really profitable, namely, an increased benefit to the man who pays the freight.

(Foot-note.) Please address all communications intended for this department to Seth Brown, care of AMERICAN GAS ENGINEERING JOURNAL, 150 Nassau Street, New York City. Kindly enclose postage if a reply by mail is desired. Otherwise, letters will be answered in this department.

Building Gas Appliance Business with a Progressive Prospect List

By C. L. FUNNELL

All of us are familiar with the story of the book salesman who became rich by selling the customers that looked difficult to the high-class man who had preceded him. The first canvasser spent his time only on people who bought easily. Salesman No. 2 figured that the lower folks were, within a reasonable limit, in the social scale, the more they needed good literature. And his commissions proved the soundness of his hunch.

Probably no man whose business fun in life is derived from selling gas appliances would hesitate to work hard over every customer who enters his store. The idea that the man who buys a mantle is a prospect for a gas heater is not new to such a business man. But it is just possible that he has never had time to get a real lively prospect list working for him. And if that is true, then his store is not selling its community at the highest possible efficiency.

Down in a Pennsylvania town last year a retail man determined to start a card file of the people who were, or who ought to be, his business friends in that town. His first step was to have an address card printed, as shown in Fig. 1. This gave the name, residence and telephone number of the prospect, and stated whether or not his home was equipped with gas. Each counter in the store was equipped with these cards, and each customer was asked to fill one out. As a reward for furnishing this information, a new mantle was given away for each card properly filled in.

Name .....

Address .....

Phone .....

I live in.....
(house or apartment)

which I .....
(own or rent)

It .....piped for gas
(is or not)

FIG. 1.—THIS CARD FORMED THE BASIS OF A NEW PROSPECT LIST MADE UP BY A PENNSYLVANIA RETAILER

The cards were also sent out to everyone listed in the telephone directory, with the request that when filled in the cards be brought to the store in person. This helped to get new customers into the store, and gave the salesmen an opportunity to show off the variety of gas appliances on hand.

Some duplication resulted from this method. But this probably was a source of profit rather than loss, for it served to tell a few people about the store twice instead of once.

To add to the interest in the cards, local newspaper advertising carried a coupon form of the same sort, inviting people to call for their free mantle.

From these three sources the store built up a neat list of names, which were divided into two main groups: those who lived in houses piped for gas; and those whose homes were not so equipped.

The next step was to get out a friendly letter to the prospects calling their attention to the convenience of small gas stoves for heating bathrooms on winter mornings. With this letter was mailed the manufacturer's letter-size folder describing the stove in question. And, of course, the letter carried an invitation to the prospect to call at the store and see the stove for himself.

As soon as one of the listed prospects purchased a stove that fact was noted on the card, and a campaign to sell him a water heater—if he lived in a detached house—was begun. And so on with other goods of interest to gas users.

With such a list of customers on hand, it is an easy matter to tie your own merchandising in with the national publicity used by the manufacturers. Let us suppose, for example, that this month's *Ladies Home Journal* carries a page advertisement for the hot water heater for which you have the agency. You can cash in by writing a letter to every woman in town on your list who lives in a detached house, calling her attention to the advertisement, and saying that you want her to come in and see how simple the heater really is. It might even pay to offer a copy of the *Ladies' Home Journal* free to any housekeeper who had not seen it.

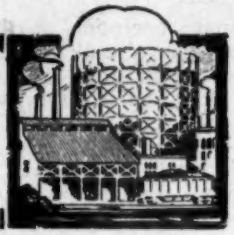
If possible, it is also advisable to feature the heater in the window display for that week, mounting a proof of the advertisement on the glass, with a sign reading, "This is the water heater that works thermal magic. Come in, please, and ask us how it does it."

In a dozen different ways the prospect list can be made to increase today's business, and so to establish the prestige of the store using it, that it will build to-morrow's trade as well.

Gas Companies Now Supply Eight Million Customers

The dependence of the country upon the prosperity of the gas companies in indicated by figures compiled showing that the industry now supplies 327,000,000,000 cu ft. of gas to 8,500,000 customers, who with their families represent about half of the population of the nation.

NEWS OF THE GAS INDUSTRY



Ralph Elsman Announces Kings County Co. Will Take on No New Consumers

The Kings County Lighting Company, of Brooklyn, N. Y., has announced that it will not add any new customers to its service.

This announcement marks a new step in the effort of the company to secure an increase in rates beyond the 80-cent limit fixed by statute. Ralph Elsman, vice-president and general manager of the company, stated that the company was now losing $1,500 weekly on the sale of gas at its present rates, and it had no intention of increasing its deficit by increasing the number of people it sells gas to "at a loss."

Supreme Court Justice Greenbaum, in Manhattan, in January denied the company's application for an injunction restraining the Public Service Commission and District Attorney from enforcing the 80-cent gas law, in an action by the company to have the law declared unconstitutional.

In a statement explaining the situation, Mr. Elsman says, in part:

"The blame for this situation does not rest with this company but rather with those self-seekers who are short-sighted enough and selfish enough to fight against the interests of the community which we serve, and put their political ambitions ahead of the welfare of the nearly quarter million population which we serve. This company belongs to its consumers. On it their health and in thousands of cases their very lives depends, and its suspension would be disastrous to them."

The letter Mr. Elsman sent to builders and real estate men of the district said in part:

"On account of the inadequacy of the 80-cent gas rate fixed by statute, this company has not been able in the past two or three years to secure new capital to enable it to make the necessary additions and extensions to its plant to provide for the growth of business. At the present time its plant facilities are greatly overtaxed. Unless and until it is relieved from the effect of the 80-cent statute it will be unable to secure any new capital and it is not warranted in taking on new customers."

Illinois Gas Association Holds Sixteenth Annual Convention

President Whipple Addresses Meeting and Speaks on Important Question of Rates

The sixteenth annual convention and exhibit of the Illinois Gas Association was held at the Sherman Hotel, Chicago, Wednesday and Thursday of this week. The meeting was well attended and the papers read were timely and of great importance to the gas industry. Mr. Whipple, the president of the association, presided and his address was filled with practical suggestions on the questions of rates, service charges and educating the public to the great importance of gas to the community. He stated that the gas companies give such universally good service that it is accepted by the consumer as a matter of fact, not realizing the many problems to be solved by the company to give this service. He advised gas company officials and employees to take an active interest in the local affairs of their community, each in his own way being an education of the public of the value of active co-operation between the company and consumers for better service. He also stated that a raise in rates did not overcome all difficulties, but economies must be practised in the boiler room and retail house. The papers were all freely discussed, and many valuable points brought out from the personal experiences of members.

The banquet held Wednesday night was the largest ever given by any gas association, nearly 1,000 attending. F. E. Luther, chairman of the entertainment committee, announced that the special features would be on a scale never attempted before, and after it was over there was no one to deny his assertion.

Boston Consolidated Authorized to Fix Standard Price at $1.10

The Boston Consolidated Gas Company has been authorized by the State Department of Public Utilities to fix its standard price per 1,000 cu. ft. at $1.10, an advance of 10 cents. The company asked for permission to make the price $1.20.

The present rate of $1 for the standard price has been in effect since October, 1918.

The selling price should not be confused with the standard price, which is a figure set by the State under the sliding scale law of 1906. By this law the company may fix its dividends and under its operation the maximum selling price to the consumer can be no higher than the standard price.

Benzol Situation Much Improved

Cresylic Acid Supply Still Short—General Improvement in By-Product Market.

The situation in benzol is much improved and it is predicted that there will shortly be no signs of the serious shortage of a few weeks ago. Prices stand at 25 cents per gallon for the 90 per cent and 27 cents per gallon for the pure.

Solvent naphtha is obtainable for prompt deliveries and is quoted 22 to 27 cents per gallon. Creosote oil is in steady demand and there has been no change in the prices of the producers and importers. It is quoted at 40 cents per gallon for the 25 per cent and 20 cents per gallon for the 15 per cent grade respectively.

Cresylic acid is not easily obtained. Prices remain the same, 90 cents per gallon for the 97 to 99 per cent grade and 85 cents per gallon for the 95 per cent dark are reported.

But a general improvement is noted in the by-product market, trading is rather quiet and prices are again in the hands of the producers exclusively.

Gas Oil Shortage Serious

22 Candlepower Gas Wastes Millions of Gallons of Oil Without Substantial Benefit to Consumer.

The following letter was sent by C. H. B. Chapin, secretary of the Empire Gas & Electric Association, to Public Service Commissioner Nixon in relation to the impending gas-oil situation:

THE EMPIRE GAS AND ELECTRIC ASSOCIATION
29 W. 39th St., New York City
March 11, 1920.

Hon. Lewis Nixon, Public Service Commission for the First District, 49 Lafayette Street, New York City, N. Y.

Dear Sir.—On March 3, operating representatives of the gas companies supplying carbureted water gas to consumers in this State met in Albany, to consider the serious situation arising from the shortage in gas-oil supply, and the rapidly increasing prices being exacted for gas-oil for future delivery. It was the consensus of opinion that if regulative standards requiring the continued use of unnecessary quantities of gas-oil in New York City are not soon modified, the price of gas to consumers will of necessity be advanced to a figure most undesirable from every point of view, and some of the companies may find themselves unable to supply gas at all.

Following the deliberations of this conference, it was resolved that the serious public aspects of the situation ought to be brought formally to the attention of the Public Service Commissions of the State, for such action as they may initiate or advise. This letter is written you in pursuance of the directions of the conference.

Details of the oil situation need not be dwelt upon in this communication. They may be found fully in the filed records of your commission. Oil companies are in many instances refusing to renew contracts at all; refusal to provide additional quantities needed to meet additional consumption is the rule rather than the exception; prices are now being quoted in excess of 12 cents per gallon; the oil now furnished is commonly inferior, in gas-producing qualities, to that furnished for about three cents per gallon at the time the present statutory rate was fixed.

The situation seems to be that the production of gas-oil is no longer as profitable to the oil companies as the use of their product for other purposes, notably gasoline, at present prices. All indications are that the shortage in supply and increase in price reflect a condition of indefinite duration, which is likely to become more serious rather than better. With the shortage in bituminous coal supply, and the prospect of still further increases in coal prices, any practicable conservation of the use of oil in gas manufacture becomes of prime public importance.

The especial reason which led the conference to urge the matter of your attention at this time is the fact that in the universal judgment of gas engineers, the present requirement of 22 candle-power gas in New York City is responsible for the annual waste of millions of gallons of gas oil, with no substantial benefit to the consumer, who would in fact be better served, both in the dependable utility of gas and, in the long run, in the cost of gas to him, if this quantity of oil were conserved and kept available for more essential use. It has been estimated that if the gas companies in New York City and Philadelphia were placed upon the Massachusetts standard of 528 B.t.u. minimum, the oil saved would be equal to the entire requirements of all the gas companies of New England. The soundness of the above statements of fact we are prepared at any time to demonstrate by convincing proof, before your commission or any legislative committee. Because the situation is so serious and because the regulative power of the State is still perpetuating an antiquated requirement which wastes large quantities of oil from a supply all too meager, we urge that you take such action, directly or through recommendation to the Legislature, as may afford relief in this regard.

Respectfully submitted,
EXECUTIVE COMMITTEE.
By (Signed)
C. H. B. CHAPIN, Secretary.

Shelbyville Petition Denied

The commission denied the petition of the city of Shelbyville, Ind., to remove the surcharge of 25 cents a 1,000 cu. ft. on the rates for gas, and changed the minimum charge of 50 cents a meter a month to a minimum charge of 50 cents net, and 60 cents gross, the net charge to prevail for bills paid on or before the 10th of the month following that in which service is rendered.

City of Minneapolis Refuses Rate Increase

Denying expressly that the gas plants of the Minneapolis Gas Light Company will be compelled to shut down unless an increase in rates is obtained, and holding that the 83 cent gas rate will be adequate to provide for the payrolls and operating costs of the company, City Attorney C. D. Gould to-day filed in the United States District Court the answer of the city of Minneapolis to the complaint of Rufus Rand, receiver of the gas company. The answer asks dismissal of the case brought by the company.

The gas company has asked the court to issue a writ of mandamus restraining the city from enforcing an ordinance providing for a sliding scale of gas rates under which the gas rates for this year would be 83 cents a 1,000 ft.

The city attorney's answer denies that the outstanding bonded indebtedness of the gas company of $6,111,000 is less than the value of properties in possession of the company. The city alleges it has no knowledge or information which might inspire a knowledge or belief that the 83 cent rate as provided by the sliding scale is inadequate.

Testimony is being taken by Judge John F. McGee who is acting as special master in chancery. In a recent decision, Judge Wilbur F. Booth, in the Federal District Court, fixed a temporary rate of 95 cents a 1,000 ft. to be effective pending settlement of the suit.

Weight of Garbage Breaks Gas Main

For some time past the city sanitary department of Atlanta, Ga., has been dumping garbage on the ground under which the 10-in. main of the Atlanta Gas Light Company runs. From day to day this refuse has been piled up until the weight became so great that the large gas main collapsed.

The men in the trouble department of the gas company worked day and night getting this work repaired so that patrons there might not be denied the use of gas. These men are due loud praise for this work for the odors arising from the refuse were almost unbearable and it hardly seemed possible for them to remain on the job. By their good work service was restored the following day.

To Hold Increased Production Convention

Seeing in increased production a means of restoring normal business and price conditions, the Chamber of Commerce of the United States, it was announced to-day, will make its eighth annual meeting, to be held at Atlantic City, April 27-29, an "Increased Production Convention."

This subject is considered of such importance that in working out a program for the meeting every topic will be considered from this viewpoint. Lack of production, it is pointed out, is one of the chief causes of the high cost of living, which cannot be reduced until more goods are put on the market. The present is a seller's and not a buyer's market. Prices have been forced up by competitive bidding. This in turn has made necessary unusual wage increases, with a still further rise in manufacturing and production costs.

Even with the exchange situation as it is, with its threatened curtailment of exports to Europe, manufacturers generally believe it will be a long time before production in the United States catches up with the demand for goods. In the meantime producers are faced with the task not only of meeting current demands, but with making up in some directions production lost as a result of the diversion of manufactured goods for war purposes.

The general subject of increased production has been divided up in the program for the convention into sub-subjects. The first to be taken up will be the Government in relation to production. Under this heading will be considered anti-trust legislation and taxation. Business of every kind is keenly interested at this time in the situation with respect to taxation, especially in the subject of excess profits taxes, against which there has been general complaint.

The second general subject to be taken up will be transportation in relation to production. This will include both land and water transportation. One of the chief causes of lack of production just now, it has been pointed out, is the general shortage of railroad equipment. One authority estimates that the country is short at least 200,000 box cars, and all lines of industry have felt the shortage.

International finance and its relation to world production has a prominent place on the program. This subject will be discussed both from the financier's and the business man's point of view. The Chamber has just expressed its willingness to name delegates to an international financial conference under limitations outlined by the Treasury Department. Lack of means of financing European industries is a decided factor in retarding production in many of the countries of Europe.

One general session of the convention will be given over to agriculture in relation to production. Here will be presented for discussion the part of the Government, the farmer and the business man in agriculture. Secretary of Agriculture Meredith will speak for the Government.

Another important general subject will be the relation of labor to production. This will be approached from both sides, the employee's viewpoint being presented by a representative of the American Federation of Labor and the employer's by a business man.

Besides the general sessions there will be held group meetings, divided as along the great divisions of industry. In these meetings the subject of increased production, as in the general meetings, will be the main topic discussed.

Southern Counties Company Asks Increased Rates for Santa Barbara

Natural gas cannot be piped from the fields of Ventura County to Santa Barbara, Cal., according to a decision reached by the Southern Counties Gas Company, and as a result the company is seeking to increase the gas rates of the city of Santa Barbara because of the increase in the cost of materials going into the manufacture of gas.

At the present time, in Santa Barbara the minimum charge is $1 for 1,000 cu. ft. or less. The new rates for which the gas company is petitioning would give a minimum of $1 for the first 700 cu. ft., $1.35 per 1,000 for the next 4,300 cu. ft.; $1.30 a 1,000 for the next 15,000 ft.; $1.25 a 1,000 for the next 30,000 ft.; and $1.20 a thousand for all over 50,000 cu. ft. The gas company figures that the average payment it now receives per 1,000 cu. ft. of gas is $1.026 and that to make a profit on its investment it must receive an average payment of $1.356 per 1,000. The rates asked in the petition are figured to give this latter average.

Lone Star Company Spent $1,765,788 to Maintain Adequate Fuel Supply

In an exhaustive report showing in detail the activities of the Lone Star Gas Company's drilling and extension operations for 1919, Ed C. Connor, chief engineer to the supervisor of the State of Texas public utilities, set forth that the company has complied with the terms of the contract with the Government whereby it was to spend at least $1,500,000 in an effort to replace the gas conserved for helium production in the Petrolia (Tex.) field. The gas was to be used by the Government and the contract stipulated that the company should make an effort to replace it for use in North Texas cities to which gas was supplied from Petrolia. This stipulation was a part of the consideration for which the $1,500,000 was paid by the Government.

Mr. Connor made his report to Mayor Frank W. Wozencraft. It relates that the company has spent $1,765,798.23 in its effort to maintain a sufficient gas supply for North Texas. In addition to this, Mr. Connor said, the company is spending an estimated amount of $4,084,890 in constructing the Western system, of which amount approximately $2,500,000 will be spent to connect the system with the Dallas and Fort Worth pipe lines.

Mr. Connor referred to the disappointing results of drilling in the Keys field for gas. He said the line which was planned after one 12-in. line was delivering 25,000,000 cu. ft. of gas daily from the field and a large amount of drilling was under way with reasonable prospect of success, but most of the wells produced oil, he said. The company then inaugurated a campaign of its own, and this also has been disappointing in point of production. The cost of the second line was $427,224.05, and its drilling campaign in all the fields, some of which have produced satisfactory results, has cost $694,882.92.

Notice of Removal of Office

J. G. White & Co., Inc., announce the removal of their offices to 37 Wall Street, New York City. They also announce that they have enlarged their organization so as to conduct a general business in the distribution of investment securities.

Gas Rates to Be Lower

Gas rates will go lower rather than higher, Samuel Insull, chairman of the board of the Peoples Gas Light & Coke Company, told the council committee on gas litigation recently. Mr. Insull was before the committee to explain why his company had contracted with the Koppers Company to build a $13,000,000 gas plant, and why his company had guaranteed the securities issued by the Koppers Company.

Mr. Insull insisted the deal was a good one. The gas company, he said, will get from the Chicago By-Products Company, the subsidiary which will operate the new plant, gas at 12 cents a 1,000 ft. cheaper than it is making it now, and 8.78 cents cheaper than in 1919. Mr. Insull said he hoped to save $40,000,000 in twenty years of the contract, and if the company can get $12,000,000 in the next six years it can buy the plant outright.

Personal Notes

ELMER E. YINGLING, manager of the Texas Distributing Company and the Western Oklahoma Gas & Fuel Company, with headquarters in Mineral Wells, was instantly killed recently at the Gill Well No. 2, three miles south of Mineral Wells, Texas. There was a star machine over the well, and it is believed that Mr. Yingling was examining some part of the equipment when the handle of the crankshaft hit him, causing his death. His body was discovered several minutes after the accident.

Mr. Yingling was fifty-nine years old, and was a native of Pennsylvania. He had lived in Kansas most of his life, however. He went to the Wichita Natural Gas Company at the time Mr. Doherty took over the properties, and for three years was superintendent of the distributing plant at El Dorado. From there he went to Duncan and Marlow, to be in charge of field and drilling operations in the southern Oklahoma field. About three years ago Mr. Yingling took charge of oil and gas development in the Mineral Wells region, retaining his position as local manager of the distributing plants at Duncan and Marlow.

CLARENCE MILLER, for two years past a salesman at the Adams (Mass.) Gas Light Company office, has resigned his position to become connected with the North Adams (Mass.) Gas Company. Mr. Miller's departure from his duties is deeply regretted by his many friends.

J. T. HASTINGS has been appointed manager of the Winchester, Ky., office of the Central Kentucky Natural Gas Company, to succeed E. J. Mansfield.

RAY T. MIDDLETON has resigned as general sales manager of the Standard Steel Castings Company, of Cleveland, to become vice-president and director of sales and advertising for Kelly Metals Company, of Chicago, Detroit and Los Angeles.

Mr. Middleton's headquarters will be Chicago, where the Kelly Metals Company, will, at an early date, establish its principal production plant. The company will continue its present plants in Detroit and Los Angeles and later establish a third branch plant, at a point to be selected in the East.

Construction Notes

Atlanta Company Planning Extensive Improvements

In order to supply gas at a satisfactory pressure to outlying districts of Atlanta, Ga., the Atlanta Gas Light Company is planning the immediate extension of its intermediate pressure system.

To supply the gas from the plant under this system the company has ordered from the De Laval Turbine Company two large steam turbine compressors capable of taking care of the rapidly increasing business of the company. This addition to the intermediate pressure system will relieve many parts of Atlanta still being supplied under what is known as the low pressure system where the gas pressure is obtained from the weight of the holder, thereby giving better service to patrons receiving their supply of gas under this system.

Extensive repairs will also be made to the water gas plant and the coal gas plant during the year.

Boro Gas Company Proceedings Closed

The proceedings before the Public Service Commission on the petition of the Brooklyn Boro Gas Company to be allowed to increase its rate from 95 cents to $1.30 per 1,000 cu. ft. of gas, which have been going on for more than a year, have been closed.

Deputy Commissioner Alfred M. Barrett, who presided at the final hearing, asked former Public Service Commissioner Edward M. Bassett, counsel for the company, and Assistant Corporation Counsel Hyatt, representing the city, to submit briefs as soon as possible in order that the Commission may render a decision without too much delay.

The company was granted a temporary increase in its rate while the proceedings were under way and now charges its customers $1.10 for each 1,000 cu. ft. of gas.

This rate may be made permanent or it may be increased to $1.30, according to the view the Commission takes of what constitutes a reasonable rate under the circumstances.

The company has accepted the valuation of its plant made by R. H. Mitchell, the Commission's expert appraiser of public utility properties, and is placed approximately at $1,710,000. This is said to be the first case on record where a public utility corporation has accepted the Commission's appraisal of its plant without question.

Lynn Gas Employees' Corporation Annual Meeting

The tenth annual meeting of the Lynn (Mass.) Gas & Electric Employees Corporation was held recently, and the reports of the clerk and treasurer were presented and showed that the finances of the corporation were in a very satisfactory condition.

There was paid for death benefits during the year $500, and a total of $1,131.65 was paid for sick benefits; total membership, 197.

The following officers were elected for the ensuing term: President, F. W. Mace; vice-president, John H. Curtin; clerk, D. J. Herlihy; treasurer, Roderick E. Roberts; director of office department, A. Wallace; director of gas works department, Dwight L. Pervere; director of gas street department, Charles H. Child; director of electric street department, Michael Deveney; director of electric station department, J. D. Haines.

Chicago Company's Operating Revenue for 1919 Amounts to $9,086,226

For the fiscal year ending Dec. 31, 1919, the operating revenue of Public Service Company of Northern Illinois, exclusive of merchandise sales, was $9,086,226.21. After the payment of operating expenses and all other charges including interest on the funded debt, there remained available for dividends $1,346,206.53. Dividends were paid on both classes of the stock, the sum total on the preferred stock being $455,280, and on the common stock $781,191.25. The balance carried to surplus was $109,735.28.

In detail the earnings and expenses account is as follows:

Operating revenues (not including merchandise sales)		$9,086,226.21
Operating expenses (including depreciation, $430,660.00)		5,560,783.00
Net operating revenues		$3,525,443.21
Other charges:		
Uncollectable operating revenue	$ 34,767.61	
Taxes assignable to operations	312,420.00	
Total	$ 347,187.61	
Net operating income		$3,178,255.60
Other income		239,687.02
Gross income		$3,417,942.62
Deductions from gross income		169,029.58
		$3,248,913.04
Interest on funded debt		1,902,706.51
Available for dividends		$1,346,206.53
Dividends paid:		
Preferred stock	455,280.00	
	$ 890,926.53	
Common stock	781,191.25	
Balance carried to surplus		$ 109,735.28

The substantial increase in the number of customers for each class of service is as follows: Electricity, 1919, 96,783; 1918, 88,012; 1917, 85,421; 1916, 75,900. Gas, 1919, 68,339; 1918, 66,295; 1917, 65,261; 1916, 61,134. Water, 1919, 6,064; 1918, 5,954; 1917, 5,896; 1916, 5,701. Heat, 1919, 1,297; 1918, 1,272; 1917, 1,282; 1916, 1,358.

Virginia Company Files Application for Increased Rates

Application is pending before the State Corporation for an increase in the rates for gas in Norfolk, Va. The application is for an increase to $1.70 from $1.30 per 1,000 cu. ft.

Higher cost of fuel materials, especially oil, was given by officials of the company as the reason that the increase is asked. Statements of contracts with the Standard Oil Company, showing large increases in the contract price of fuel oil, were also filed.

Proposed rates asked by the Virginia Railway & Power Company for Norfolk gas will mean an increase of 40 cents per 1,000 cu. ft. for the first 2,000 ft. of gas. After the consumer has used 2,000 ft. the price is somewhat modified by a reduction of 1 per cent of the price up to 22,000 ft. consumed. After any customer has used 22,000 ft. of gas in one the price will be discounted 2 per cent up to 40,000 ft.

Users of over 40,000 ft. of gas will be charged a flat rate by the company of $1.40.

According to the schedule filed with the commission the minimum rate which the company will charge will be 75 cents. No bill will be made for less than this amount.

Ashtabula to Lose Natural Gas

That Ashtabula and neighboring cities will be without natural gas after Sept. 1, was the formal and authoritative announcement made by M. B. Daly, president of the Northeastern Ohio Oil & Gas Company, in a letter to F. W. Stone, manager of the Ashtabula Gas Company.

President Daly announced some time ago that such action would probably be taken and this announcement was merely an assurance that such steps were to be taken.

Commission Approves Tacoma Gas Increase

The State of Washington Public Service Commission has filed its approval of the new tariff submitted by the Tacoma Gas & Fuel Company increasing gas rates in Tacoma and suburbs. The increase granted averages approximately 25 per cent.

In support of its finding the commission offers figures disclosing a decrease in the earnings of the company from 3.83 per cent in 1913 to .79 per cent last year. On a plant valuation of $1,903,093 which includes additions and betterments to December 31, 1919, the new rates will produce an annual net return to the company of 4.55 per cent. The rates are effective Feb. 20, 1920.

The application of the same company for permission to increase rates for gas service in Olympia was reserved by the commission until a further date.

15,000,000-Ft. Gas Well Discovered in Oklahoma

A 15,000,000-ft. gas well has been discovered six miles due south of Haskell, Okla. Announcement of the well was received with interest in Muskogee, as a possible source of relief from the gas shortage, the location of the well being such it is believed a connection with the Muskogee mains could be easily made. One of the large compressors of the Oklahoma Natural Gas Company is in Haskell, and Muskogee gets a large part of her gas there.

Indiana Commission Withdraws Amortization Order

The Indiana Public Service Commission has authorized the Citizens Gas Company, of Indianapolis, Ind., to continue indefinitely the 60-cent rate on gas and withdrew the order requiring the company to set aside at least $100,000 a year to amortize excess cost in building forty coke ovens. The excess costs were estimated at $850,000.

The commission found that the costs of operation have increased to such an extent that only by relieving the company of amortization can the 60-cent rate on gas be maintained.

The commission two years ago, when the company was ordered to build the forty ovens, estimated the cost would be about $1,500,000, but if built in normal times would not cost more than $650,000. A bond issue of $1,500,000 was authorized at that time. A temporary increase of rates from 55 cents to the franchise maximum of 60 cents was granted, and out of the revenues from this increase the company was to amortize the excess cost of construction at the rate of at least $100,000 a year, reducing the cost to $650,000.

Last year after meeting the operating and fixed charges the company showed that a profit of $97 had been made. If required to amortize $100,000 it would be in arrears.

Report of Pacific Lighting Corporation Shows Increase of $1,000,000

Pacific Lighting Corporation, San Francisco, Cal., which is a holding corporation only, with no plants, at its annual meeting received the report of its president, C. O. G. Miller, showing a net profit for the year, after all deductions of $1,049,803. Gross income of the company for the year was $6,167,268, an increase over 1918 of $1,128,943 or 22.4 per cent. There was written off for depreciation during the year $605,974.

The report follows:

Assets

Stocks of gas and electric corporations	$9,271,918.31
Other stocks	80,200.00
Bonds of Los Angeles Gas & Electric Corporation and its underlying bonds	132,175.00
U. S. Liberty bonds	75,100.00
Investments in bonds of other corporations	349,732.27
Sundry debtors	6,658.10
Cash	59,592.15
	$9,975,375.83

Liabilities

To stockholders for 41,620 shares of preferred capital stock and 48,000 shares of common capital stock issued	$8,962,000.00
Profit and loss account	978,692.49
Dividend accrued on 41,620 shares of preferred stock for November and December	34,683.34
	$9,975,375.83

President C. O. G. Miller, A. Schilling and F. W. Van Sicklen, vice-presidents, were re-elected, and these with Charles Holbrook and George F. Volkmann, constitute the directorate. Horace H. Miller was re-elected secretary-treasurer.

Wisconsin G. & E. Increases Its Capital Stock

A large increase in its capitalization was announced by the Wisconsin Gas & Electric Company, of Racine, Wis., which filed amendments to articles of incorporation showing a raise from $3,350,000 to $5,350,000.

Pacific Gas & Electric Company to Contest Award of $1,375,000

The Pacific Gas & Electric Company has filed exceptions to the reports of Master in Chancery H. M. Wright in its cases against the City and County of San Francisco, Cal., regarding a rebate to gas payers of approximately $1,375,000.

The suit was brought by the gas company against the city and county of San Francisco following the action of the board of supervisors in fixing a rate of 75 cents a 1,000 cu. ft. for the years 1913 to 1916. The company collected 85 cents a 1,000 cu. ft. for these periods. Each ordinance as agreed to at that time as far as its operation was concerned, would become ineffective at the expiration of each year. According to the stipulation agreed to in this matter it was to the effect that the ordinance fixing rates for the fiscal year 1913-14 would become inoperative after June 30, 1914, and there would be no prevailing rate to go by in the absence of the enactment of a new ordinance for the following fiscal year, and the same condition would prevail with regard to each of the other two ordinances.

The company objected to all three of the ordinances in question and brought suit in the United States Court to have them set aside. Temporary injunctions were issued and the cases were in process of hearing when, in August, 1915, the State Railroad Commission assumed jurisdiction of rate fixing in California to the exclusion of the County Board of Supervisors.

Soon after that the city of San Francisco, Cal., called upon the commission to fix new gas rates for San Francisco, and in August, 1916, by which time the last ordinance of the Board of Supervisors had expired, it asked the gas company to enter into one of two alternative stipulations: One, that, whatever rate should be fixed by the State Railroad Commission, should be held retroactive to June, 30, 1916; two, that whatever decision should be rendered by the United States Court with regard to the 1915-16 rate should be held to carry over to such time as the new rate to be fixed by the Railroad Commission should go into effect.

The gas company chose the latter alternative. But, in so doing, it did not in any way agree to abide by the decision of the Federal Court.

Gas Supply Will Be Cut Off

Natural gas will not be furnished to St. Clairsville, Ohio, after May 31, according to a notice sent from the Columbus office of the Ohio Fuel Supply Company, which indicates that the service will be shut off June 1. It states that the company will be unable to furnish the fuel after May.

The Ohio Fuel obtains its gas for St. Clairsville from the West Virginia-Cleveland mains of the East Ohio Gas Company, and the latter company has notified the Fuel Company that it can not longer furnish it gas in that territory. The Fuel Company will ask the Public Utilities Commission for permission to discontinue the service.

Pacific Gas & Electric Asks for Increased Rates

The Pacific Gas & Electric Company, San Francisco, has petitioned the Railroad Commission of California asking the legal right to increase the gas rates 5 per cent, which would make the price of gas a fraction less than $1 per 1,000 cu. ft. to all classes of consumers.

The application for increase in rates is based on the assertion that the present rates, because of the high cost of labor and material and the increase in the value of the company's plants due to additions and betterments, do not yield an adequate return.

Increases on the gas rates proposed in other districts by the gas company range from 10 to 60 cents a 1,000 ft.

30-Cent Increase Granted to Tampa Company

The price of gas to Tampa, Fla., consumers has been increased as of Feb. 1. According to Manager Roscoe Nettles, the company was forced to take this step by the increased cost of materials and labor.

The increase will average about 33 cents per 1,000 cu. ft. The old rate to the small consumer was $1.85 per 1,000 ft., and the new rate is $2.22 per 1,000 ft. When the 10 per cent for prompt payment is deducted from the latter figure it will leave $2 flat, as against a former charge of $1.67 per 1,000. Rates on larger quantities will be affected accordingly, being on a sliding scale according to the amount of gas used.

Mr. Nettles said the company will lower the price again as soon as conditions allow.

Annual Report of Providence Gas Company Shows Increase

The Providence Gas Company increased its surplus by more than $30,000 in the past year, according to the report made by President Manchester at the annual meeting of the stockholders.

Treasurer Arthur E. Short's report says:

"The amount added to our depreciation reserve is materially less than the amount we estimate to be necessary to provide for such depreciation as is not covered by our maintenance accounts."

Earnings by quarter year are as follows: First quarter, $54,525.44; second quarter, $52,357.55; third quarter, $68,563.85; fourth quarter, $150,517.32; total, $325,964.16.

According to the condensed balance sheet as of Dec. 31, 1919, the value of property and plant is given as $11,055,223.48, an increase of nearly $1,000,000.

Gross operating earnings were $2,532,064.99, as against $2,281,882.37 in 1918. Operating costs for 1919 were $2,014,714.19, as against $2,078,019.86 in 1918.

"The effect of increased efficiency at our manufacturing plant and of certain economies which have been introduced," the report states, "is such that we would look forward to the coming year with reasonable confidence if we could be assured of prices for coal and oil not materially in excess of the average prices paid in 1919. Unfortunately, the present price of both coal and oil is so high and the prospect for the near future so uncertain, that it is impossible to estimate future earnings with any degree of accuracy.

The stockholders voted to enlarge the board of directors by two and elected, to fill the new positions, Florrimon M. Howe and W. G. Roelker. The other directors were re-elected as follows: Henry D. Sharpe, Webster Knight, Frank W. Matteson, William L. Hodgman, John B. Branch, C. H. Manchester, John O. Ames, J. R. MacColl, Frederick S. Peck.

At the close of the stockholders' meeting the directors met and re-elected the following officers: President, C. H. Manchester; vice-president, Henry D. Sharpe; secretary and treasurer, Arthur F. Short; assistant treasurer, Augustus W. Bourne.

Aurora Gas Company Asks Rate Increase

Announcement has been made that the Western United Gas & Electric Company of Aurora, Ill., has applied to the State Public Utilities Commission for permission to raise gas rates 30 cents per 1,000 ft. The present rate, in effect for more than six years, is 90 cents per 1,000, the lowest in the State outside of Chicago. In seeking the raise the Western United company states "it has held off hoping that it would not have to ask an increase, and that the raise asked is to just meet increased cost of material and labor with no additional profit for the company."

The Western United Company serves six of the largest counties in northern Illinois, and is believed the largest company in point of territory served, in the State.

School Children to Be Taught to Read Gas Meters

As part of the thrift program being carried out by Manager Henry S. Whipple, of the Rockford, Ill., Gas Light & Coke Company, school children will be taught to read gas meters. Manager Whipple has offered the services of a half dozen of his force to visit the schools to explain the operation of the meter and to give instructions in gas economy.

Thrift in lighting is a good health measure, the children have been told. They have been urged to utilize daylight and to be careful in the use of all artificial light. The following facts will be presented to the pupils by the gas men: "There are two types of gas burners, the open flame and the incandescent mantle. Open-flame burners carry 3 to 7 cu. ft. of gas per hour, according to the size of the tip. For a guide-light or a small amount of light use a very small tip. Dirty or broken tips lessen lights.

"The incandescent mantle uses about one-third as much gas as the open flame and gives more light and less heat. The whole mantle should be glowing white, with no flame showing and no black deposit. The efficiency of a mantle depends upon the proper air and gas supply; these may need careful adjustments each time that the gas is turned on.

"Look out for leaks. Escaping gas is dangerous to health and injures furnishings Report leaks to the gas company at once; stop them temporarily with soap, adhesive plaster or tire tape. Tighten cocks that turn too easily. Do not use a cock that turns all the way round. Know where the gas enters the house and how to shut it off quickly in case of an emergency."

U. G. I. Stockholders Will Vote on Preferred Stock Issue

Stockholders of the United Gas Improvement Company will vote May 3 on the creation of the authorized issue of $15,000,000 of 7 per cent cumulative preferred, of which $6,103,000 may be offered to holders of the present stock at par, constituting a 10 per cent stock allotment. It was considered better to finance requirements for improvements this way than to issue more short-term notes. There is $61,103,000 of stock outstanding, all of one class. Drexel & Co., of Philadelphia, have underwritten the subscription by stockholders of $6,103,000 preferred. It is expected that an underwriting syndicate will be formed.

President Samuel T. Bodine, in a letter to stockholders in explanation of the proposed increase of capital stock, says:

"It is the policy of State utility commissions and municipal authorities to discourage establishment of competing companies where the existing company gives good service and extends its plant to care for new business offered at remunerative rates. As all of the properties in which the United Gas Improvement Company is interested are located in prosperous and growing communities, this policy involves the annual provision of considerable sums for working capital and for extensions. Prior to the war these funds were mainly provided by the investment of the undivided profits of the United Gas Improvement Company and by the sale to the public of securities of the local companies.

"War conditions have narrowed the market for securities of gas and electric companies, largely because the increased cost of labor and materials entering into the production of gas and generation of electric current have not been fully offset by increases in rates allowed by public authorities.

"Your directors believe it is wise to now make provision against a possible continuance of these conditions for two or three years by creating a security so attractive to our stockholders and others that it will find a ready market."